



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,177	03/23/2004	Akio Fukase	118856	2165

25944 7590 05/31/2006

OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER

QUARTERMAN, KEVIN J

ART UNIT	PAPER NUMBER
----------	--------------

2879

DATE MAILED: 05/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/806,177

Applicant(s)

FUKASE, AKIO

Examiner

Kevin Quarterman

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 4-6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>0106</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment and remarks received 05 April 2006 have been entered and overcome the objection to the title.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Antoniadis (US 6,366,017).
4. Regarding independent claim 1, Figure 1 of Antoniadis shows an electroluminescent device comprising a substrate (10); an electrode (12) disposed on the substrate; a hole-injection layer (14) disposed directly on, and adjacent to, the electrode; a light-emitting layer (16) disposed on the hole-injection layer; a reduced layer (18) disposed on the light-emitting layer, the reduced layer being formed by a reduction of an alkali metal or alkaline earth metal compound with a reductant (col. 3, ln. 42-48); and a transparent conductive film (20) disposed on the reduced layer, the reduced layer providing an improvement in electron injection efficiency to the light-emitting layer.
5. Regarding claim 2, Antoniadis teaches the reductant being aluminum (col. 3, ln. 47).

6. Regarding claim 3, the Examiner notes that when the structure recited in the reference is substantially identical to that of the claims, claimed properties or functions are presumed to be inherent (MPEP § 2112.01). The reduced layer of Antoniadis inherently possesses a visible light transmittance exceeding 50%.

Response to Arguments

7. Applicant's arguments received 05 April 2006 have been fully considered but they are not persuasive.

8. In response to applicant's argument that Antoniadis does not teach a hole-injection layer formed directly on an electrode, the Examiner respectfully disagrees. Applicant notes that Figure 1 of Antoniadis shows a conductive layer (13) disposed between the anode (12) and the hole transport layer (14). The Examiner notes that Antoniadis provides a teaching that the conductive layer (13) is optional (col. 2, ln. 47-48), and thus, may be removed. Therefore, since the hole-transport layer of Antoniadis would be formed directly on the anode with the removal of the optional conductive layer, the Examiner holds that Antoniadis teaches applicant's claimed invention, as discussed earlier.

9. In response to applicant's argument that Antoniadis does not teach the hole-injection layer injecting holes supplied by the electrode into the light-emitting layer, the Examiner notes that applicant discloses that the hole-injection layer may be made of a triphenylamine derivative film. Antoniadis teaches that the hole-transport layer may comprise a suitable conductor of holes, including 4,4'-Bis[N-(1-naphthyl)-N-phenylamino]-biphenyl (NPB), 4,4',4''-tris [N-(3-methylphenyl)-N-phenylamino]

Art Unit: 2879

triphenylamine (m-MTDATA), conducting polyaniline (Pani), polyethylenedioxythiophene-polystyrenesulfonate (PEDOT:PSS), thiophenes, metal-base or metal-free phthalocyanines. Thus, since Antoniadis discloses the hole-transport layer being made of a triphenylamine derivative, the Examiner holds that the hole-transport layer of Antoniadis is capable of injecting holes supplied by the electrode into the light-emitting layer as claimed in the instant application (See also MPEP § 2112.01).

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

11. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

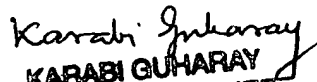
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quarterman whose telephone number is (571) 272-2461. The examiner can normally be reached on M-TH (7-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin Quarterman
Examiner
Art Unit 2879

kq 
25 May 2006


KARABI GUHARAY
PRIMARY EXAMINER